ENERGY PROFILE

Tunisia

SUSTAINABLE DEVELOPMENT GOAL 7: ENERGY INDICATORS (2018)

|				
Renewable energy (% of TFEC)	11.9	Access to electricity (% of population)	100.0
Energy efficiency (MJ per $1 of GDP)	3.9	Access to clean cooking (% of population)	>95
Public flows renewables (2018 USD M)	19.2	Per capita renewable capacity (W/person)	30.929

TOTAL PRIMARY ENERGY SUPPLY (TPES)

TPES	2013	2018
Non-renewable (TJ)	387 048	428 627
Renewable (TJ)	38 862	44 466
Total (TJ)	425 910	473 094
Renewable share (%)	9	9

Growth in TPES	2013-18	2017-18
Non-renewable (%)	+10.7	+1.2
Renewable (%)	+14.4	+0.4
Total (%)	+11.1	+1.1

Primary energy trade	2013	2018
Imports (TJ)	280 917	344 845
Exports (TJ)	134 424	82 629
Net trade (TJ)	- 146 493	- 262 216
Imports (% of supply)	66	73
Exports (% of production)	46	38
Energy self-sufficiency (%)	69	46
Net trade (USD million)	- 1 722	- 2 523
Net trade (% of GDP)	-3.7	-6.3

Total primary energy supply in 2018

- Oil
- Gas
- Nuclear
- Coal + others
- Renewables
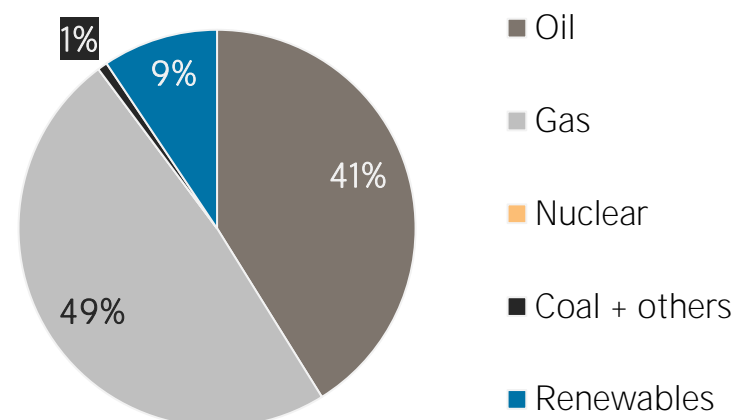
Renewable energy supply in 2018

- Hydro/marine
- Wind
- Solar
- Bioenergy
- Geothermal
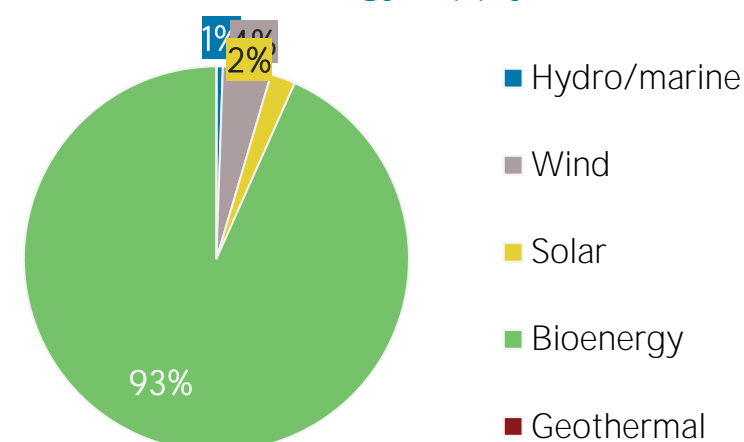
RENEWABLE ENERGY CONSUMPTION

Consumption by source	2013	2018
Electricity (TJ)	1 730	2 334
Heat (TJ)	0	0
Bioenergy (TJ)	34 603	38 589
Solar + geothermal (TJ)	0	0
Total (TJ)	36 333	40 923
Electricity share (%)	5	6

Consumption growth	2013-18	2017-18
Renewable electricity (%)	+35.0	+27.1
Other renewables (%)	+11.5	+0.6
Total (%)	+12.6	+1.8

Consumption by sector	2013	2018
Industry (TJ)	861	811
Transport (TJ)	11	14
Households (TJ)	34 702	38 694
Other (TJ)	759	1 404
Renewable share of TFEC	13.2	11.9

Renewable energy consumption in 2018

- Electricity
- Heat
- Bioenergy
- Solar + geothermal

- Industry
- Transport
- Households
- Other
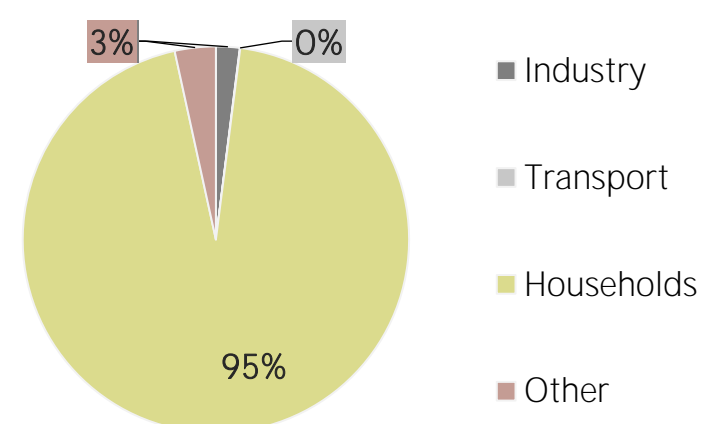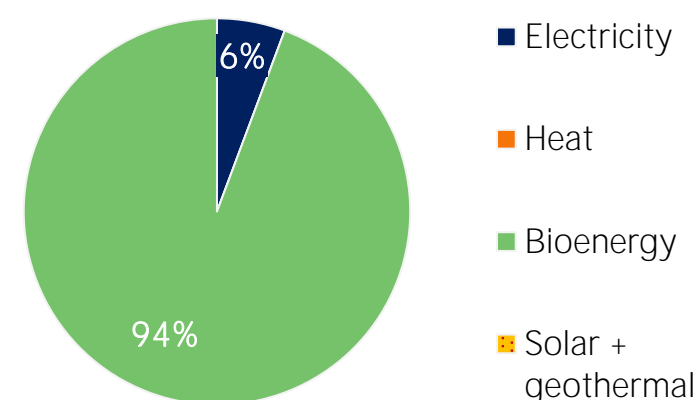
ELECTRICITY CAPACITY AND GENERATION

Capacity in 2020	MW	%
Non-renewable	6 272	94
Renewable	401	6
Hydro/marine	62	1
Solar	95	1
Wind	244	4
Bioenergy	0	0
Geothermal	0	0
Total	6 673	100

Capacity change (%)	2015-20	2019-20
Non-renewable	+ 23	+ 5.2
Renewable	+ 20	+ 3.8
Hydro/marine	0	0.0
Solar	+ 244	+ 18.5
Wind	0	0.0
Bioenergy	0	0.0
Geothermal	0	0.0
Total	+ 22	+ 5.2

Net capacity change in 2020 (MW)

Non-renewable	Hydro and marine
+ 312	0
Solar	**Wind**
+ 15	0
Bioenergy	**Geothermal**
0	0
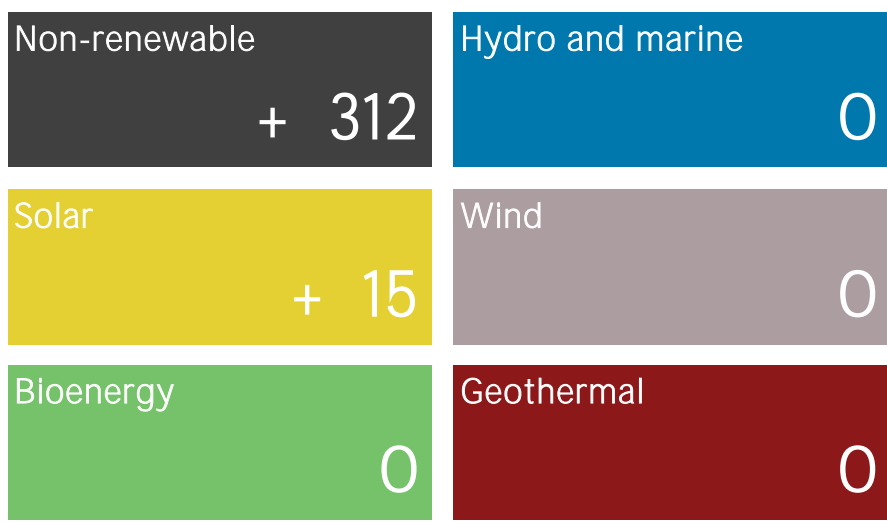
Generation in 2019	GWh	%
Non-renewable	21 272	96
Renewable	824	4
Hydro and marine	66	0
Solar	258	1
Wind	500	2
Bioenergy	0	0
Geothermal	0	0
Total	22 096	100

Renewable capacity in 2020

- Hydro/marine 15%
- Solar 24%
- Wind 61%
- Bioenergy
- Geothermal
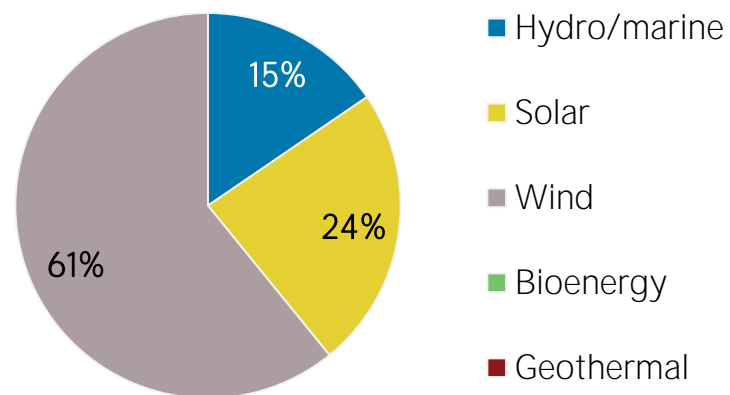
Net capacity change (MW)
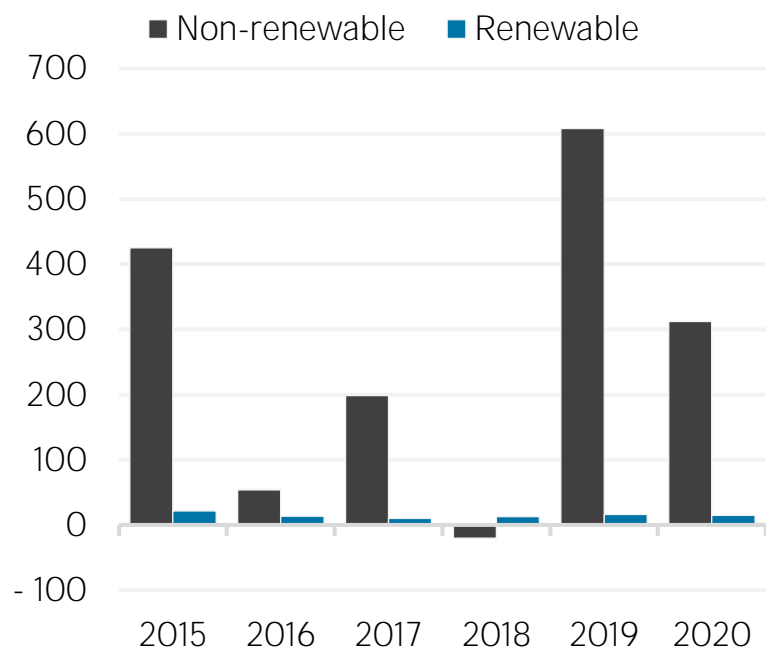
Capacity utilisation in 2019 (%)

Fossil 41
Nuclear
Hydro/Mar 12
Solar 37
Wind 23
Bio
Geo

Per capita electricity generation (kWh)
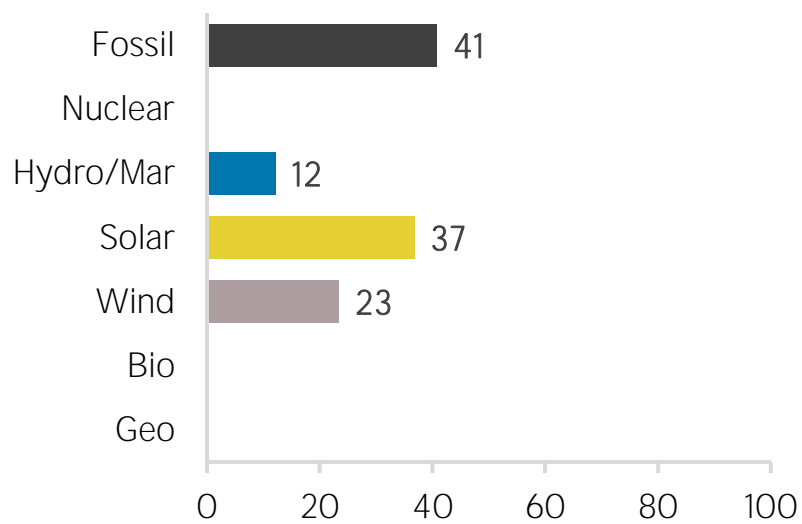
Renewable generation (GWh)
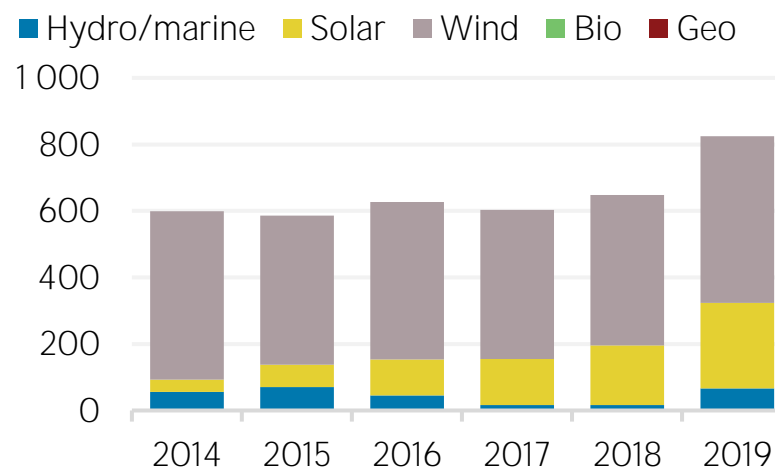
Most immediate clean energy targets & NDCs

	year	target
Renewable energy:	**2050**	**100 %**
Renewable electricity:	2020	14 %
Renewable capacity:		
Renewable transport:		
Liquid Biofuel blending mandate:		
Other transport targets:		
Renewable heating/cooling:		
Renewable Hydropower		
Off-grid renewable technologies:		
Energy efficiency (Energy):		
Energy efficiency (Electricity):		

Latest policies, programmes and legislation

1	Renewable Energy Law for Electricity Production (No.74/2013)	2015
2	The Decree on connection and access of renewable electricity to the national grid	2011
3	Tax exemptions for the import of renewable energy and energy efficiency equipment materials	2010
4	Decree 2009/362 on Renewable Energy and Energy Efficiency Premiums	2009
5	Decree on rules of selling renewable electricity to the Tunisian Company of Electricity and Gas (STEG)	2009

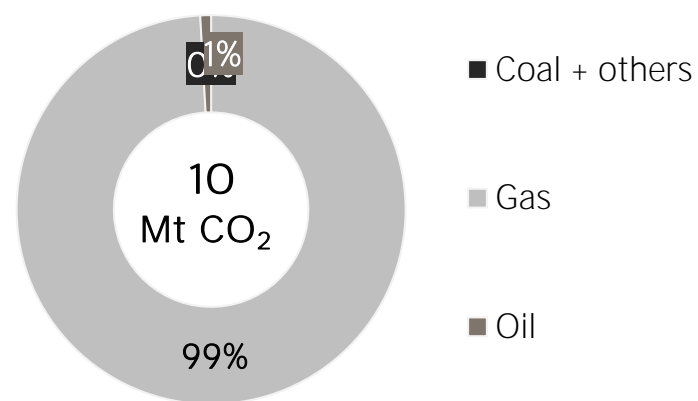## References to sustainable energy in Nationally Determined Contribution (NDC)

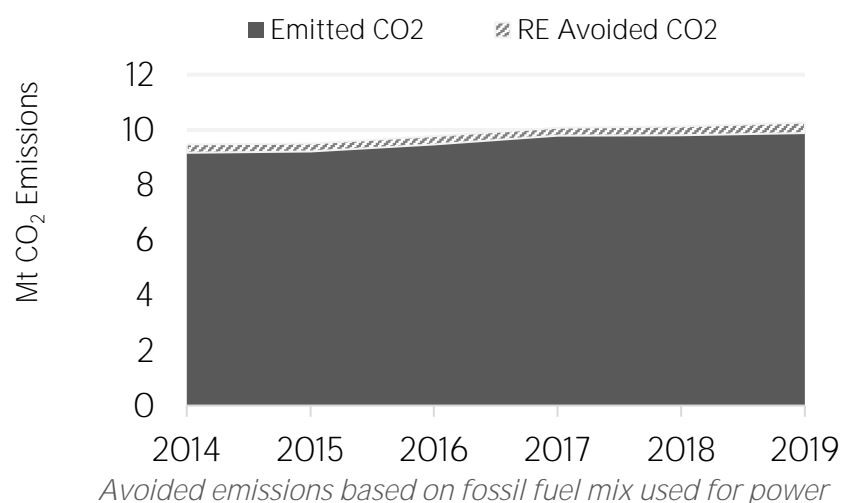|	Conditional	Unconditional	unit
- **Renewable energy**			
- electricity	3 434	382	MW (additional)
- transport			
- heating/cooling			
- Energy efficiency			

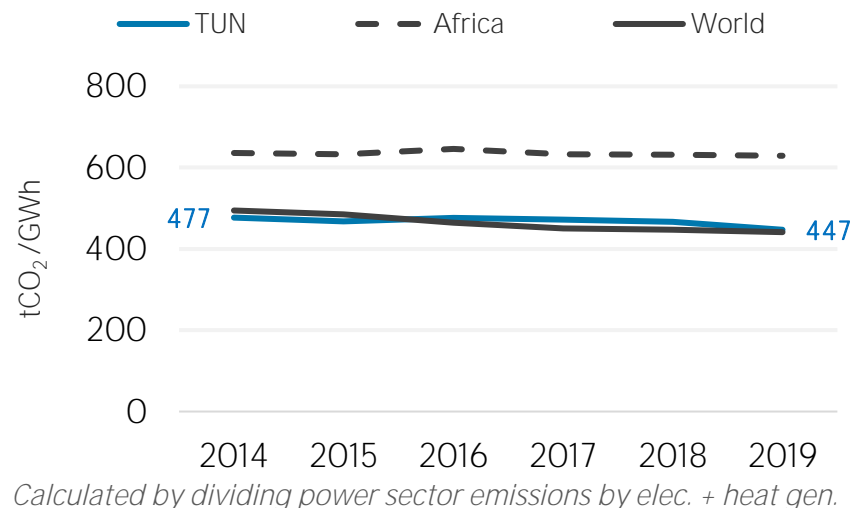### Energy-related CO_2 emissions by sector
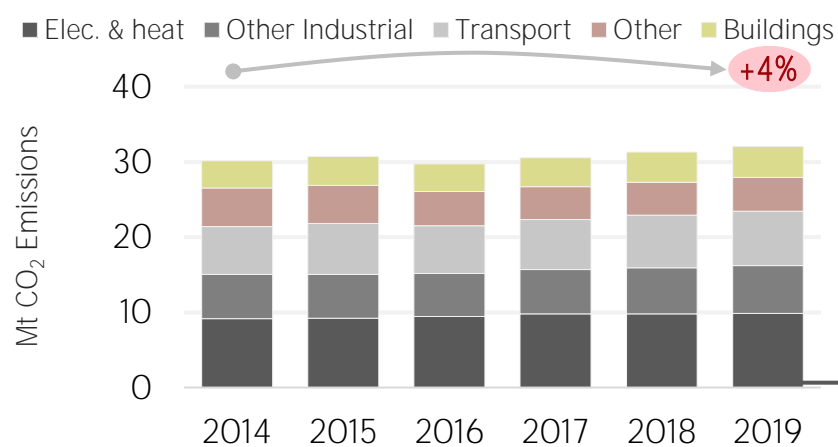
Elec. & heat generation CO_2 emissions in 2019

Avoided emissions from renewable elec. & heat

Avoided emissions based on fossil fuel mix used for power

CO_2 emission factor for elec. & heat generation

Calculated by dividing power sector emissions by elec. + heat gen.

RENEWABLE RESOURCE POTENTIAL

Distribution of solar potential

World ▢ Tunisia ▮

Proportion of land area (y-axis, 0%–100%)
Annual generation per unit of installed PV capacity (kWh/kWp/yr)
(x-axis: <1200, 1200-1400, 1400-1600, 1600-1800, 1800-1900, 1900-2000, >2000)

Distribution of wind potential

World ▢ Tunisia ▮

Proportion of land area (y-axis, 0%–100%)
Wind power density at 100m height (W/m²)
(x-axis: <260, 260-420, 420-560, 560-670, 670-820, 820-1060, >1060)

Biomass potential: net primary production

1.5
tC/ha/yr

● = Global average of 3-4 tC/ha/yr
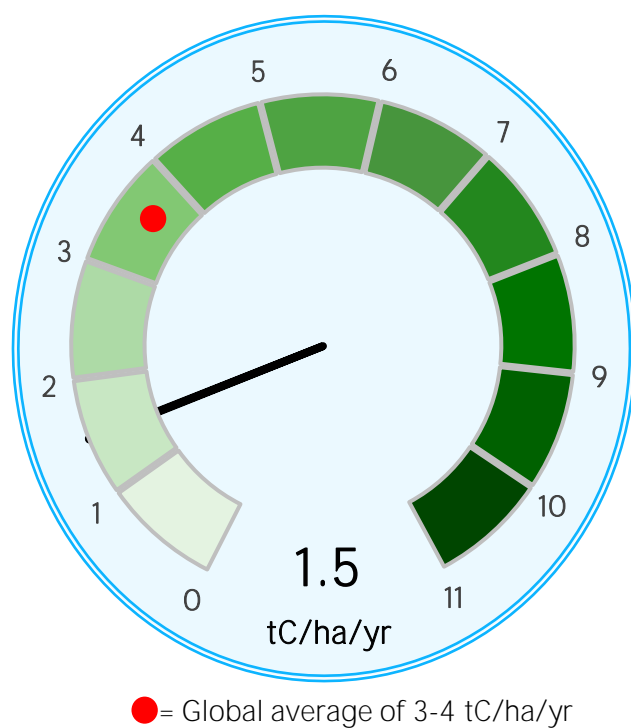
Indicators of renewable resource potential

Solar PV: Solar resource potential has been divided into seven classes, each representing a range of annual PV output per unit of capacity (kWh/kWp/yr). The bar chart shows the proportion of a country's land area in each of these classes and the global distribution of land area across the classes (for comparison).

Onshore wind: Potential wind power density (W/m2) is shown in the seven classes used by NREL, measured at a height of 100m. The bar chart shows the distribution of the country's land area in each of these classes compared to the global distribution of wind resources. Areas in the third class or above are considered to be a good wind resource.

Biomass: Net primary production (NPP) is the amount of carbon fixed by plants and accumulated as biomass each year. It is a basic measure of biomass productivity. The chart shows the average NPP in the country (tC/ha/yr), compared to the global average NPP of 3-4 tonnes of carbon per year.

IRENA
International Renewable Energy Agency